INDEX TO VOL. IX.

Apiary—

A good location for a., 135; a Scottish a., illus., 179; Moore's two-hive a., 230; Phelps' a., 237; a visit to Neighbor H.'s a., 253; Hill's a., 292; a. of 225 cols. in box hives, 453; a 3-colony a., 610;

Bees—

B. leaving hive in cold weather, 10, 27; b. and grapes, 7, 8, 88, 92, 152, 528, 547; poisoning b., 8; two colonies in a chaff hive, 17; stingless, 18, 48, 167, 188, 193, 437; fifteen from one swarm, 27; blowing b. out of hives, 27; bl. and Itals., 28; shipping b. from the South, 28; marking hyb. b., 31; brood late in fall, 31; lazy b., 31, 603; bl. b. in Italy, 34; covering b. with wire cloth for winter, 35; number of b. for one locality, 36; b. not accepting q., 37; doubling up b. in spring, 41; letting b. starve, 41; quarter-blood Itals., 41; in-and-in breeding, 49; what to do for b. with dys., etc., 49, 89; b. killed by lightning, 59; poisoning b., 66, 70; Doolittle's av. profit on b., 70; Cyprians in their native home, Benton, 71; successful b. culture, 72; moving to new place, 74; b. for profit, by Mrs. Cotton, 75; cross b., 83; accidental swarm in April, 87; b. under snow, 88; b. from Tahite, 89; brimstoning, 89; Hyatt's objection to Itals., 89; mania for swarming out, 132; selling b., 138; talking to b., 138; do b. complain? 140; do b. freeze? 141; Langstroth on the Cyp. b., 165; trigona, 167, 227; apis dor., 168, 219; 324, 389; shall we give up b.? 170; Itals. ahead, 173; Gallup vs. hybrids, 173; how Doolittle doubles in spring and fall, 174; b. in Texas, 178; to get rid of fertile workers, 185; moving b. in winter, 187; reviving frozen b., 190; Holy-Land b. for wint., 191; b. absc. without a queen, 191, 607; b. dying for stores in wint., 191; plenty of stores for b., 221; Langstroth on blacks and Itals., 222, 332; the coming b., 228; crossness of dark Itals., 232; some cols. consume more than others, 234; women and b. in Neb., 234; packing b. in Texas, 238, 271; individuality in b., 238; b. doing well outside of hive in cold weather, 239; what killed the b.? 253; improvement in b., 267; where b. go when robbed, 268; selling b. by the pound, Flanagan, 269; too many b., 273; new industry in selling b., illus., 274; moving b. from cellar in daytime, 285; Itals. in Australia, 286; b. swarming without a queen, 290; b. sw. in Mich. May 12th, 292; in Ill. before May 10th, 292; b. pulling each other, 293; burying b., 296; Cyprians in winter, 308; Langstroth on the probable cause of loss last winter, 319; b. at fairs, 323; Doolittle on killing b., 331; robbed b. going with robbers, 335, 348, 402; abnormal b., 335; b. stinging their own members, 341, 376; b. from Texas, 343; to manage runaways, 344; covering b. with hay, 345; b. that won't work in upper story, 346; Itals. on sorghum mills, 346; b. on trees in Texas, 347; blacks and Itals. in winter, 347; black Itals, 348; abs. with q. in Minn., 348; raising b. in the house, 348; new sw. abs., 349; b. coming to an apiary, 349; black b. for winter, 350; less than 1 lb. July 4th, 352; $2 per lb., 360, 390; ship. by pound, 360; too much smoke for b., 372; Holy-Land b., 374; raising b. in greenhouse, 380; Cyprians in Mo., 384, 496; disturbing in wint., 385; b. of India, 386; why did they die? 392; can b. extract sting? 394; b. going 2 miles to prepare hive, 395; b. in open air, 395; b. of Italy, 395; getting b. under difficulties, 396; a plea for blacks, 398; blue b., 399; hatching brood without b., 399; hiving b. on sections only, 399; Hungarian b., 400, 453; b. starting queen-cells when they have a q., 400; b. entering hive of own accord, 401; future of Itals., 401; Cyps. and Holy-Land, 402; b. to Oregon, 402; first Itals. west of Miss River, 402; Albinos, 409; dark-banded Itals., 434; eating holes in duck, 436; b. caves in Texas, 436, 544, 602; water and sugar for shipping b., 442; b. stinging horses, 443; b. in Neb., 443; b. separating, 446; b. on onions, 448; are b. taxable? 449, 549; watering-place for b., 451; Cyps. for increase, 452; large swarms, 452; savage b., 454; capabilities of b., 481; success with b. not alway in number of cols., 487; McDaniel's queries about b., 495; ant-lion a friend of b., 498; unsealed br. for new swarms, 499; carrying b. 3 miles, 499; inserting cells when q. is removed, 501; b. to be killed, 517, 518; apis Amer., 525; b. on a rampage, 531; swarming by telephone, 532; deciding b. queenless, 535; b. in caves in Cal., 539; b. enraged by buckwheat, 549, 598; cross b. from imp. q., 552; getting b. from tree, 552, 597; yellow b. from black q., 554; b. killing and balling their queen, 554; queer ways of consuming stores, 556; how far do b. go? 595; b. as medicine, 598; do b. pay? 599; poisoned b., 602; laying worker b. in same hive with laying q., 603; 3-banded hybrids, 605; b. with shriveled wings, 605; b. in Mass., 605; in a chimney, 605; missionary b., 609; how b. help, 610.

Bees, Diseases of—

Dys. in Dec., 34; candy for dys., 126; borax for dys., 290.

Bee Feed—

Candy, Pearce's make, 27; silver-drip syrup, 30; sweet corn, 90; sugar syrup vs. honey, 116; maple sugar, 134, 255, 503; melon juice, 203.

Cages—

Which is the best c.? 28 Peet, 32, 59, 86, 99, 113, 452; wire cl. for c., 35; Viallon's candy for c., 144; Carpenter's imp. on Peet c., illus., 167; Alley's views, illus., 269; marking c., 360; latest imp. in Peet c., illus., 373; water-bottles for c., 397; water in c., 423; bottle queen-c., 442; small c., 548.

Candy—

Viallon's c., 275, 383, 500; saved by sugar c, 333, 350; c. for cages, 333, 434; to make without heat, 538; c. of gran. sugar, 567; dif. of feeding c. in winter, 608.

Chaff—

Oak leaves a substitute for c., 190; c. packing, 192, 271, 295, 346, 350, 351, 388, 396, 454; c. in Ga., 186; c. cushions and vent., 608.

Comb—

Paper c., 85; what to do with c. from which b. have died, 99; why c. get black, 180, 181; c. between upper and lower stories, 188; care of surplus c., 238, 268; value of old c. for wax, 241; McIlwain's holder for c., illus., 278; drone c. on flat-bot. worker fdn., 296; how Miller cares for empty c., 323; with 6800 bees, 361; thick c., for ext., 398; c. filled with honey instead of pollen, 429; adding c. in building up, 436; Perry's c. cupboard, 503; Minn's c. holder, illus., 529.

Departments—

Black List, 50.
Bee Botany, 11, 92, 223, 273, 391, 455, 510, 536.
Bee Entomology, 22, 285, 537.
Blasted Hopes, 40, 65, 149, 200, 224, 300, 352, 382, 557.
Cartoon, 46, 47, 200, 225.
Editorials, 48, 97, 99, 152, 203, 254, 307, 360, 412, 464, 516, 566.
Growlery, 16, 169, 403, 441, 486, 530.
Humbugs and Swindles, 81, 131, 391, 454, 505.
Honey Column, 48, 99, 153, 204, 256, 309, 361, 411, 466, 474, 570.
Heads of Grain, 27, 82, 134, 186, 238, 290, 342, 394, 446, 498, 546, 599.
Kind Words, 5, 57, 110, 162, 214, 566, 317, 369, 421, 472, 523.
Ladies' Department, 40, 90, 181, 234, 300, 351, 382, 426, 483, 559, 598.
Notes and Queries, 41, 90, 143, 193, 243, 296, 349, 401, 453, 505, 558, 609.
Reports Encouraging, 38, 90, 142, 192, 224, 297, 557.
Smilery, 169, 273, 351, 455, 537.
Juvenile Department, 78, 142, 180, 235, 282, 325, 377, 432, 484, 537.
Lunch Room, 100, 132.
Tobacco, 144, 194, 252, 304, 357, 403, 456, 505, 565, 614.

Drones—

Importance of good d., 76; rearing d. from worker eggs, 77; what to do with live d., 231; d. brood in upper story, 403; color of d., 447; d. with colored eyes, 448; rearing d. and q. from one mother, 543, pure d. from Ital. q. mated with black d., 596.

Early-Amber Sugar Cane—

Clar. with clay, 35; Cogswell's report, 36; Awrey's report, 41; Clement's report, 59; in Nova Scotia, 187; how to start, 239.

Enemies of Bees—

Hylocapa, 22; honey-beetle, 22; mosquito hawk, 23, 285; mantis relig., 23; millers, to kill, 37, swallows, 82; pine grosbeak, 123; implement to destroy moth, 187; toads, 187; asi. miss., 455; blue-jays, 507; mason bees, 537; mall. bom., 537; lady-birds, 550; ants, 553, 605.

Extractors and Extracting—

E., 4-frame, 140; another aid for ext., illus., 322; Dadant's pamphlet on ext., 342; an ex. for loc., 451.

Feeders—

Washboard f., 87; Hain's, illus., 122; Large's f., 345; the tin-pan, 424; DeWorth's, 477; bread-pan f., illus., 478; dif. with atmos. f., 556.

Feeding Bees—

F. new swarms, 37; f. comb h., 40; filling combs with honey for f., 42; f. back ext. honey, 126; early f. to get much honey, 175; flour f. inside of h., 234; f. in open air, 296, 342; f. candy in spring, 345; f. in July, 378; sugar vs. nat. stores, 394; syrup for b., 397; fruit-can f., 502; comp. value of sugar and honey, 547; C coffee vs. A., 550; f. flour in fall, 553.

Foreign Countries—

Scotland, 12, 558; Benton from Ceylon, 168; South America, 450.

Foul Brood—

Foul b., 19, 64; Doolittle's big article, 118; laws of Mich. relative to, 131, 143; in Utah, 296; Harbison's views, 337.

Foundation—

Sagging of all kinds of f., 17; Bonham's process with f., 26; prepared paper for base of f., 36; to prevent f. sticking, 76; dipped f., 77; Faris f. mach., 86, 370; Foster's mach. for f., 112, 190; wax vs. wires to prevent sagging, 139, dipping f., 143; f. from rubber, 166, 255, 268, 360, 397, 604; Parker's mach. to fasten f., 281; to fasten f. in frame, 295; soap root for f. rollers, 334; how Jarrett fastens f., 347; inventor of f, 351; Hanford's new tool to fasten f., 402; molded f., 504; Dadant on f., trans., 541; f. without wires, 553.

Frames—

How to wire f., illus., 224; closed top, 394.

Grape Sugar—

Advantage of g. s, 29, 446; for wint., 277, 481; purity of, 373; sale of, 385; in the South, 402; not always deadly, 432, 601.

Hives and Fixings—

Seps. of perf. metal, 10; 1½ story, 84; best position for ent., 86; mammoth h., 78, 350; bott m-bars of thin hoop iron, 85; a queen-rearing h., illus., 111; Heddon's, illus., 116; painting h., 134; L. frame for cold climates, 136; perf. seps., 137; frames with bars only half way down, 137; paper and wood seps, 141; trans. clasps, 169; chaff h. for summer, 177; Jackson on box h, 185; tenement h, 191; Root's h, 193; Heddon on box h, 219; bottom-boards of stone, 231; chaff h. vs. Simp. in S. C., 238; Bliss implemen for wiring frames, 268; tenement h, 234; h. on benches, 296; box h. vs. Simp., 297; chaff h. for wint., 335, 346, 449, 450; starters, full size of honey-boxes. 391; Todd's views on chaff h. 399; side-opening h, 400; views on the L. frame, 433, 502, 536; Brooks' single-walled h, 440; washing h, 448; novel chaff h, 451; cheap obs. h, 475; honey-boards and chaff, 490; patent h, 498, 528; seps. or not, 518; sawdust to pack h, 532; imp. of div. boards, 541; protected bottom-boards, 592; shall we use seps.? 610.

Honey—

Medicated h, 86; heather-h. in Scotland, 91; bitter h, 91; h. on posts and bushes, Ladd, 133; h. gran. in comb, 136; artificial comb. h, 139; to tell source of, 140; h. for sore eyes, 144; labels for h, 166, 360; making labels stick to tin, 187, 600; first h. for 1881, 194; tin cans for retailing h, 227; Doolittle on side and top storing, 232; ext. old h, 240; new h, 290; h. from red clover, 291; bleaching h, 294; h. required for 1 lb. of bees, 342; newly gathered gran. h, 399; 1000 tons of h, 426; marking weight of h, 429, 559; how to get h, 442; 10,000 lbs. of h., 451; ext. h. souring, 453; h. in Aug., 453; h. from corn, 499; thin h. souring, 551; ext. vs. str. h. 556; h. to ship bees by pound, 559; h. in New Brunswick, 559; storing and keeping h, 591; bad h, 395.

Honey-dew—

Honey-d, origin of, 22; in the east, 119; in Oregon, 121, 340; in South Carolina, 342; in Arkansas, 350; from the clouds, 374; in Tennessee, 450; black h. d. 454; bad. 559.

Honey-Plants—

Corn, 11, 80, 595, 610, 611; cotton, 11, 558; mallows. 12; mignonnette, 13; Simpson, 13, 62, 244, 255; willow, 14, 28, 91. 223, 273, 587; experiments with h. p, Hollenbach, 23; fireweed, 26; blue thistle, 27, 190; Lane on red clover, 38; peach-blossoms, 41; cottonwood, 41, 85, 86; Spider, 62; Hasty's clovers, 78; alsike clover, 36; red clover, 83, 244, 291, 517; black willow, 83; Fontaine's exp. with, 87; alfalfa, 91; Cal. white sage, 92; silver buckw, 92, 399, 489; flaxweed, 92; onions, 117, 176, 236; box-elder, 120, 186, 294; skunk cabbage, 137, 223; portulaca, 139; rape, 140, 141; black-heart, 140; buckwheat in N. Y., 141; wild cucumber, 143; Chinese tea-plant, 144, 238; basket willows, 170; to start seeds, 186; green corn, 189; sugar-cane, 255; from Denmark, 273; aspen-tree, 274; sending seedlings by mail, 277; huckleberry, 334, 438; locust, 343, 503, 504; ilex dahoon, 391; horsemint in Texas, 393; willow roots, 394, 611; rape, 403; basswood, 446; Mollie Heath, 447; Hercules club, 455; pycnanthemum linifol., 455; picnan. pil., 455; ascle. tube, 455; plan. lan., 455; raspberries, 480; Sp. needles, 498; R. M. bee plant, 500; buckwheat, 506, 599; veron. Vir., 510; mentzelia, 536; loasaceæ, 536; blue vervain, 539; big red clover. 540; smartweed, or polyg. persi., 540; wire-weed, 550; rapp, or winter rape, 553; h. p. in Oct. and Nov., 567; oak, 601, 611; fireweed, 606; peas, 611; butter-weed, 506.

Introducing—

Int. Itals. among blacks, etc. 36; Bugg's sug. on i, 38; how Stanley i, 74; Parmelee's mode, 87; Gallup's plan, 222; i. a queen to a hive having one, 400; i. by frames of hatching brood, 501; Hooper's new plan, 604.

Merrybanks—

46, 60, 150, 201, 244, 305, 350, 410, 507, 560, 579.

Notes from Banner Apiary—

7, 59, 111, 163, 215. 267, 3.9, 371, 423, 475, 525, 687.

Pollen—

P. in Nov, 30; p and dys, 166, 189, 600; influence of p on dys, 253; p for brood-rearing, 344; p cause of death, 350; p from timothy, 381; wint. without p, 389; too much, 447, 503; Ballantine on p, 493; p, Peters' opinion, 529; p too close to bees, 558.

Propolis—

Uses of p, 378.

Queens—

Q. ejected in winter, 28; parody on black q, 37; q. reared at dif. seasons, 69; should dollar q. produce bees nine-tenths' black? 82; accepting vir. q, 82; art. and nat. q, 82, 592; q. dead before ent., 89; how Conser raises q, 134; rearing q. out of season, 163; Cyp. and Holy-Land q, 166; to tell age, 177, 240, 344; how q. sting each other, 177; fert. fall-reared q in spring, 179; our red-clover q, 189; int. vir. q, 192; drone-laying q, 241; Alley's mode of int., 241; clipping, 266; Gallup on rearing q, 277; worthless q, 291; Ital. q. turning black, 294; q. with laying daughter, 343; marking q, 344; two q wint. in one hive, 344; non-layers, 348, 46?; art. and nat. swarming q, 372; how Doolittle rears good q, 375, 439; trials in rearing q, 389; dollar q. in poor season, 395; dif. in q, 396; Williams' mode of int., 398; q. extra-pure, 424, 603; Itals. on red clover, 435; Buchanan on rearing q. 445; two in a cell. 447; a q. that stings workers, 448, 556; q whose daughters produce 3-banded workers. 482; sending q far in Aug, 495; three q. in a hive, 498; q. fighting in air. 500; inducing q. to take bridal trip, 500; q-cells vs. queenlessness, 505; improvement in appearance, 506; q. that lay non-hatching eggs, 506; laying q. from each nucleus once in 10 days, 527; q. that will sting, 544; caging[vir. q, 546; q. flying 27 miles, 559;

two q. in a hive, 554; an uneasy q, 555; good and poor q, 599; new way to send in winter, 599; caged q. dropping eggs, 601.

Queen-Cells—

Hayhurst's mode of getting q c, 33.

Rambles—

25, 75, 125, 233, 327, 375, 491, 591.

Reports, Various—

R. from Medina co, 9; Easterday's, 11; r on honey-pl'ts, 13; Given's, 16; Jones's, 17; Hart, Florida, 27; Rathbun, Mich, 29; Pommert's r for 1880, 32; Hunt, Mich, 32, 289; Cook, Ct, 32; Garst, Ohio, 33; Robinson, 32; Miller, N. J., 33; 1 lb. in June, Soules, 34; Morningstar's first summer, 34; Hummel, 35; bad r from sugar, 35; Stevens, Ind, 38; hopes not bl, 40; Abraham, Wis, 40; White's first 10 years, 64; Mellen's r on boxes, seps, etc, 66, 119, 171, 383, 539; Stanley's story, 73, 115; Houghtaling's r, 82; Phillips, Ohio, 84; Steele's exp, 85; Gardner, 5650 lbs from 52 cols, 90; Hasty's r for 1880, 115; Garrett's r from La, 119; Miles, Neb, 121; Jackson's blasted hopes, 123; Bridge's exp in Cal, 124; Freeborn, 17,000 lbs from 250 cols., 125; Berg, Ind, 136, 400; A B C child, 137; Sweet's r for 1880, 138; 36 from 1 in 8 mos, 144; McCrory's blasted r, illus, 149; Neighbor H, 169; Penn's Star apiary, 175; Hagen's story, 177; White's bees in Fla., 184; Weiss, Pa, 189; Malone's exp, 190; Coon, Cal, 191, Hayhurst's r, 192; Ballantine's r, 192; Our Own Apiary, 216, 298, 358, 379, 478; Grimm's r, 217; Townley's r, 221; Rodney's repulse, illus, 225; Lobdell, N. Y., 226; Wilder's r from Ga, 230; C. C. Miller's r, 231, 534, 557; Calver, Pa, 237; Mrs. Axtell, 241, 340; Langstroth, 244; Shook, 252; Floyd, Mo, 252; Heddon's r, 272; T. J. Cook's talk, 279; hints in regard to making r, 280; Nelson, Kan, 295; Lane's r, 297; Old Curley's r, 300; Wilkins sisters, 300; Burridge, Utah, 327; Smith's r from Pelee Island, 329; Buchanan's exp, 335; Moore's r on art. swarming, 339; Mrs. L. Harrison, 339; from Northern N. J., 340; L. C. Root's r, 351; Mrs. Squire's r, 351; Burch's r, 361; Ellis's r, 373; Kaye's r 374; Dimick's r from Fla, 381; Britton's r, 388; Rhodes, Col, 399; Calvert's r from Can, 424; Boombrower's r, 427; Gallup's r from Cal, 435; Case's management of bees, 438; good r from Vt, 447; Bliss on Cal, 449; r from bee-k. of Medina co, 466; Roff, Col, 483; Harkness, N. Y., 488; Taylor, N. C., 489; Lechler, Cal. 490; Clarke's visit to Jones's bee islands, 494; Torrey, Wis, 501; Churchill, Me, 504; Doolittle's r for 1881, 526; White's r, 533; Kelley, Col, 548; Sobey, Cal, 552; hurrah for Texas! 558; Shangle's r, 593; McNeil's, 595; Neuhaus' big r, 597; Lime Valley ap, 599; Stock's, Cal, 602; good r from rubber plates, 604; Good's r for 1881, 604; Squier, N. Y., 606; Woolver, N. Y., 606; Cox, Ind, 607; O. H. Townsend's r, 608; Williamson's r, 587; Atchley's r from Texas, 583; Woodburn's r, 584; Snyder's r, 584.

Robbing—

To stop r, 83; 143; how Gastinger stops, 123; look out for r, 292; r when first set out, 394.

Saws and Other Machinery—

Honey-knives, 8; Faris' fdn. mach, 29; making barrels, 30; hardening plaster plates, 33; galv. iron for honey-tools, 34; Adams' h p, 37; planer s, 38; scales to reg. daily yield, 39; DeWorth's mandrel, illus, 42, 559; perf. seps, 70, 425; Given's mach. to wire brood frames, illus, 79; windmills, 85; homemade h p, 91; magnets, 91; mach. for 1-piece sections, illus, 98; new planers, illus, 113; new nail-box, illus, 122, 194; battery swindles, 152; typewriters, 186; telephones, 188; a new starter mach, illus, 218; Bliss's sun evap, illus, 220; Given fdn. press, 270; Osborne's mach. for punching frs, illus, 271; winder for Wat. watch, 274, 373; device for swarming-box, illus, 276; Gauff's swarming-box, illus, 330; Kingsley's foot-power saw, 341; Simp. tool-box, illus, 359; Chapman's machine to pierce bars, 479; Hunt's power, illus, 487; Star saw-set, illus, 545; a handy scraper, 549.

Sections—

Miller's views, illus, 281; s on all winter, 287, 294, 295, 343, 350, 384, 479, 503; fancy s for winter, 426; taking off s, 446; taking s from bees, 482, 492; 1-lb vs. 2-lb. s, 556.

Smokers—

The best, 84, 143, 185; Clarke's cold-blast, illus, 322.

Spider Plant—

To raise S, 62; raised under glass, 114; S p and humming-birds, 452.

Stings—

Poison from s, 12; s and rheum, 24, 30, 192, 500, 504; 554, 594, 604; s in eyelid, 349; death from s, 390; s for sick folks, 473, 477.

Swarming—

Kleinow's trouble, 15; art. s, 138; one swarm for the Lord, 139.

Transferring—

Trans. in July, 454; trans. in Oct, 555.

Ventilation—

Relation of v to wint, 285; v in wint, 346, 452, 535; upward v, 386, 497, 548, 551; philosophy of v, 593.

Wax—

Ext. w by steam, 308; moth worms living on pure w, 477, 595; Romeo's queries, 603.

Wintering—

Chaff for w, 19, 135, 136; Mellen's ideas on w, 24; Roop's plan, illus, 67; w in a cistern, 75; Thomas' method, 77; w with chaff and cellar, 83; Heddon's views, 116; Grimm's cellar w, 128, 329, 476; views of N. E. B. K. A., 129; cob bran vs. chaff, 135; cotton seed for packing, 143; how to start again after losing all. 164; leaving sections on in winter (see section); Morgan discards cellars, 172; w without protection, 189; outdoor and cellar w, 189; successful cellar w, 226, 401; w two cols. in one hive, 239, 601; water for bees in w, 241; cellars ahead, 241, 296; Morrison's mode in Pa, 271; toughness and endurance for w, 279; Secor's letter on w, 288; chaff vs. other modes, 289, 449; Boardman's success, 291; forest-leaves for w, 346, 401; Setford's plan, 351; loss of 800 by one man, 382; cellars not always ahead, 397; w without loss, 398; dry brick in w, 398; Christie's views on w, 430; statistics of losses for 1880-'81, 439; F. C. White's mode for w, 470; exp. in w, 475; J. W. White's views, 491; Hill's device to cover frames in w, illus, 530; Heddon on w, 642; Wakefield's queries, 546; Smith on w, 596; Grote's ideas, 600; frames of candy for w, 607; Hayhurst's letter on w, 588; Hill's device, 611; Snyder's views on w, 583.

Index to Correspondents.

A B C, 5; Abraham C, 40; Adams G, 446; A T M, 266; Alden C J, 549; Alzaida, 352; Alcott D, 137; Alley H, 241, 269, 453, 400; Alger H B, 453; Alfred H, 296; Amery Eva, 326, 484; Amig A A, 607; Annis A A, 304; Anderson O J, 377; Anderson L A, 450; Andrews J, 610; Anderson J, 144; Anglemire S, 29, 401; Angell C H, 394; Armstrong B M, 283; Arwine E, 5; Astry W, 214; Atchley E J, 57, 296, 343, 558; Awrey Mrs. H A, 18, 199; Awrey F E, 41; Axtell L C, 341; Axtell Sarah J W, 241; Ayars J T, 395.

Bagshaw R A, 558; Baer W, 187, 502; Basset H, 506; Ballentine W, 86, 192, 493, 512; Ballou C R, 141, 144, 214, 603; Baldridge M, 28; Ball J, 252; Bangham Mrs R, 40; Baldwin L H, 296; Baird J, 97; Balch C A, 283; Bailey R H, 139; Bailey A, 194; Bailey G B, 296; Bailey S E, 350; Bailey J W, 350; Baker J, 352, 395; Bargers J, 396; Bannon Julia, 484, 538; Balcomb T, 544; Baxter J S, 557; Bean C M, 516; Beeton R, 496; Beach L, 214; Berwick E, 266; Beal W J, 11, 12, 92, 273, 391, 455, 510, 536; Beckwith L, 143; Beech J T, 294; Benham A D, 88; Bedell J D, 296, 598; Benton F, 72, 168, 219; Bemis L E, 454; Berg E, 136, 243, 398, 401; Bemis J H, 338, 403, 459; Bethe Mrs F, 214; Bethel H C, 350; Bell F J, 350, 390, 498; Bellemey E, 377; Benson S, 401; Bentley & Young, 422; Beliah J P, 472; Berry M, 496; Bishop H T, 243; Bills W C, 370; Bissell L E, 65; Birney W H, 422; Birrell E, 448; Bixby A, 65, 349; Blanton O W, 453; Blackman F N, 600; Bliss W W, 88, 221, 252, 297, 334, 351, 449, 556, 609; Boardman H R, 88, 278, 291, 296, 350; Bonham A F, 26; Bowers J L, 27, 343; Bookwalter J A, 421; Both B, 243; Boombrower F, 429; Bostwick C L, 346; Bourget P A, 451; Bowen H E, 524; Border J, 555; Boles T, 491; Bradford A A, 240, 317; Brown M J, 473; Browne R A, 318; Brayton D, 350; Brands J D, 340; Bright Bros, 350; Breece H H C, 86; Britton R D, 388; Bridges C, 124; Brown J S, 403; Bryan A W, 214; Brooks J M, 441, 532, 548; Brooks J K, 538; Brush A, 552; Brown J H 559; Brooks C L, 81; Brooks R F, 304; Browney W, 452; Brumbaugh A J, 296; Brunner C H, 395; Bryner J M, 404; Burrage J H, 297; Butman C, 597, 524; Burrage G W, 328; Buzaid J, 404; Burbank D S, 404, 456; Busy Bee, 382; Butcher T P, 454; Bulison C E, 456; Bultch W C, 473; Butler T R, 547; Buchanan S, 404; Buchanan J A, 337, 445; Burmeister H, 286; Buger W, 89; Bugg J L, 38; Bu-

zick D B, 143; Burtch W C, 162; Burch H A, 186, 361, 413, 462, 464; Butler S S, 140, 280; Butler T, 342, 383; Byrne J P, 582.

Cadwell E, 84; Case C A, 592; Capser C, 90; Carpenter H F, 167, 402; Carroll B F, 12, 23, 143, 179, 238, 389, 545, 551; Carter J W, 91; Callen M M, 400; Carr W, 167, 228; Carlile J S, 421; Cannon L C, 188; Calvert A E, 425; Cary W W, 143; Cairns W, 446, 607; Case N F, 81, 187, 296, 439; Case N, 295; Castello G, 150; Callear C W, 448; Caldwell J V, 194; Calver T, 237,473; Canoles Mollie E, 236; Cauthen W S, 238, 546; Canoles C E, 344; Church Ida M, 611; Cheney A W, 90, 318; Chapman T, 214; Christie E F, 350, 431; Chapman F B, 452, 454, 480; Cheney F M, 454; Chase F, 503; Churchill E P, 504; Chapman J, 505; Clark N, 122, 132, 218, 578; Clark A L, 297; Clarke W F, 18, 495; Clark G, 395, 401, 477, 552; Clayton C W, 401; Clarke R E, 537; Clement W P, 60; Cline J, 241; Cox A, 607; Cook H F, 484; Cook J, 358; Collins W H, 404, 456; Cochran Mrs J S, 347; Cole G, 358; Collier J A, 194; Cole J L, 357; Coblentz L H, 149; Cobb L S, 214; Cobb Mrs P P, 31; Cogswell B, 36; Converse J C, 27; Conser J, 134; Cook T J, 279; Cook A J, 22, 23, 123, 529, 537, 567; Cook J, 345; Cook E H, 33; Cooper J D, 5, 37, 342; Coon O E, 191, 447; Corbin S H, 296; Condon M G, 304; Cottrell N E, 352; Coble J, 451; Cotton Mrs, 47, 62, 75; Cooper L N, 459; Coates A, 472; Cogshall W L, 477; Crilly T, 90; Craycraft F L, 79, 142, 284, 378; Crandall C M, 193; Crompton E, 607; Crowfoot J, 291; Culp H, 14, Culp C P, 162; Curley Old, 300; Cutchawi J H, 304, 369; Cutting H D, 242; Cyrenius F H, 240, 344.

Dadant C H, 255, 541; Darrah Ada B, 485; Dart J E, 91; Daniels H, 401; Davison A S, 85; Davis H A, 131, 448; Davidson T L, 139, 191; Davies J, 426; Danley S A, 535; Datton F P, 549; Deisher W K, 89, 110, 399; Denton A G, 201; Della Torre F, 85; Deaton N, 394; Dennes C Z, 58; Deming Maria, 189; Deming G A, 456, 506; Deardorff A, 193; Devenport R, 27, 92; Dean N B H, 252; Dean J E, 194, 549; Dean G W, 243; De Worth W, 42, 425, 477; Denniston S L, 243; Derr Eva, 589; Dines C, 378; Dimick F S, 381; Dickson H, 455, 516; Disston H & Sons, 545; Dickinson E J; 555; Dodd J, 34; Dodd C F, 162; Douglass E R, 223; Dorman H, 537; Dorman M L, 369; Dorman M C, 391; Donnelly Imogene, 577; Doolittle G M, 20, 63, 68, 69, 119, 127, 174, 182, 194, 217, 233, 268, 331, 376, 439, 482, 527, 588; Drane L T, 472; Dunn A M, 28; Dubois M D, 28; Duvall T & C, 29; Dutton F P, 214; Duff A H, 66, 372, 500; Duitt B, 401; Dunbar N, 187; Duncan Sarah E, 382; Duke H R, 422.

Earhart P, 456; Earnshaw J, 486; Easterday E S, 11, 242; Eastman H A, 473; Eby J H, 456, 549; Eckley Emma, 377; Eddy Bros, 317; Edgmand Eliz, 282, 377; Edwards I, 345; Eilenberger A F, 337, 454; Elv I, 266; Ellis W, 373; Emmons E A, 65, 456, 473; Endly W J, 404; Engle J M, 57; Epperson J M, 57; Etherington A L, 438; Experimentalist, 593.

Fan L, 317; Faville Mrs C, 524; Fay M M, 297, Farrington H P, 547; Favor & Dudley, 557; Ferner A H, 110; Ferris C G, 394; Feasel I, 382; Ferguson W H, 472; Fitzgerald I G, 255; Fiddes A, 401; Fischer & Stehle, 610; Fletcher D W, 193, 465; Flanders H F, 318; Flanagan E T, 110, 131, 190, 270, 342, 379, 552; Flournoy & Foster, 136; Flower W E, 28; Floury J F, 229; Floyd A, 253; Fleming J W, 343; Folts W, 92; Forbes J, 404; Fontain W S, 87; Fooshe J D, 611; Footer T, 38; Foote W, 266; Foster O, 113, 333, 397, 504; Fox J G, 57, 90; Fox H H, 88; Fradenburg A A, 14, 115, 189, 559; France J M, 41; Francis S, 193; Freeborn S I, 126; Fraser A, 516; Fronce C H, 296; French W L, 604; Fullwood C, 287.

Garst J, 33; Gates G W, 217, 402; Gardner D, 58, 90, 401; Gauff D K, 330; Gale L D, 91; Gates S C, 358, 404; Garret M A, 119, 493; Gandy Lillie A, 377; Gastinger F C, 124; 551; Gaston F E, 554; Gallup E, 173, 222, 277, 435, 539; Gardner K, 558; Galbraith T, 568; Gill M A, 544; Gillett Martha, 377; Giles J S, 401; Gilliland J C, 214; Gilmore J, 369; Given D S, 16, 80; Glazier C E, 225; Good I R, 87, 101, 374, 604; Goble J, 369; Gould J, 451; Grainger E, 58; Griffith A, 391; Graham F, 38; Greer S L, 450, 559; Green P D S, 5; Green E Z, 41; Gregg J Jr, 81; Gregory H K, 136; Grimm C, 559; Grimm G, 129, 218, 329, 349, 476; Graves W H, 140, 401; Greeley Mrs C A, 370; Grant M W, 395; Gray J L, 488; Grubb J W, 596; Greenleaf J C, 554; Gregg W A, 599; Grote C H, 600; Gregory J K, 577; Guild H M, 84; Gurnee Emma, 378.

Hatch C A, 609; Hall T S, 524; Hall D S, 137, 422; Hagen H T, 391; Hambley D C F, 5, 404; Harwood W, 144; Hartwell Mary E, 5; Hart W S, 28, 238, 453, 537, 580; Haskin G S, 9; Hasty E E, 20, 78, 115; Hayhurst E M, 33, 192, 243, 351, 496, 589; Hartwell A P, 57; Harrison A B, 57; Harrison Lizzie, 181; Harrison Lucinda, 80, 142, 181, 234, 237, 270, 327, 339, 350, 378, 385, 403, 486, 590, 594, 598; Hackman, H S, 143; Harrison Isabella, 266; Harrington H B, 169, 253, 308; Hardin B M, 283; Hassett B, 317; Harris J B, 352; Hayes L M, 369; Hamilton S T 399; Hanford E D, 402; Hawley D F, 422; Havely W C, 444; Haight C J, 450; Harkness J W, 452, 488, 600; Harrison E M, 453; Harris M J, 455; Haucke C, 498; Halbert H A, 499; Heddon J, 13, 73, 117, 178, 220, 273, 393, 444, 482, 543, 585, 611; Herriman G G, 404; Hempleman, A W, 453; Henderson J H P, 65; Henderson W P, 139, 318; Higdon, W D, 346, 472; Hinds W D, 386; Hildeman E S, 92; Hintz A J, 402; Hitchcock J C, 141; Hilton Mrs J, 531; Hinshaw E J, 225, 506; Hill W C, 399; Hilton W T, 274; Hill S, 346; Hinsdale J W, 346; H L B, 37; H F B, 565; Hobbs M L, 346; Hofstatter L, 30; Hooper J W, 604; Hollenbach G L, 23, 578; Holmes R E, 135; Hopkins C F, 528; Hoover A J, 150; Hossler J C, 524; Houghtaling D, 82, 89; Howell E D, 238, 503, 507; Hoyt W, 452; Hoge J L, 347; Hoswell G W, 401; Hooper G H B, 369; Horley E, 421; Hodge E T, 401; Holtke F, 578, Hubbard N, 490; Hubbard G K, 528, 569; Hudson M L, 239; Hughes J S, 10; Hutchinson W Z (see Notes from Banner Apiary), and 436, 547; Hunt M H, 32, 289, 487; Hutchinson W C, 610; Hutchison J D, 91, 243, 500, 506; Hummel A, 35; Hunt E, 489; Humphrey Alice, 300; Hyatt G, 89; Hyne J M, 448.

Ilinski A X, 453; Ingram J P, 602; Ingram W, 430; Isaacs A, 472; Israel N J, 41; Israel C E, 323.

Jackson L R, 123, 185; Jackson G F, 555; Jackson E, 180; Jarrett J E, 225, 347; J D, 291; Jansen T H, 453; Jeffrey H C, 277; Jenkins Ada, 162; Jewell J E, 304; Johnson D H, 30; Johnson J W, 192, 398; Jordan Mrs A E, 5, 30; Joiner M A, 404; Jones G W, 17, 433; Jones D A, 169, 219, 599; Jones C M, 241; Jones T G H, 401, 448; Josenhans O G, 244; Johnston Lizzie, 433; Johnston J W, 501.

Kaye A W, 374; Kelley S H, 548; Kenyon L B, 449; Kendel A C, 171, 224, 242, 429, 479, 553; Kenyon G G, 36, 558; Kennard C W, 41; Kersten H C, 5; Kerr T C, 317; Keeney V W, 377, 422, 610; Kettering C, 391; Kennedy G W 398; Kennell F, 523, 553; Kenyon G G, 558; Kendall J & Co, 499; Kinnicutt G W, 403; King J S, 143; Kingsbury H, 225; Kingsley C, 92, 242, 295, 341, 455; Kirk J W, 446, 559; Kitter W T, 214; Kirk W, 292; Kirk Emma, 326; Kidd W J, 380, 381; Kincade C H, 401, 421; Kinney G, 422; Kintner, 6, 551; Kiser J J, 610; Kilpatrick A, 446; King W L, 557; Klein P J, 45, 90, 614; Klar A L, 341; Kleinow O, 15, 267, 273, 288, 498; Kloer T H, 335; Klum, 553; Knorr L, 296, 577; Knight S A, 317; Knowles C G, 503; Knowlton Mrs A, 598; Koontz Cattie G, 325· Kregloe E L 41; Krum M, 91.

Lay J E, 193, 393, 578; Ladd E, Jr, 133, 242, 252, 348, 454; Lake C H, 200; Laue D P, 5, 300, 524; Lane S H, 39, 297, 389, 399; Langstroth L L, 143, 166, 223, 244, 321, 333; Larkin C S, 194; Lawrence H, 236; Larrabee C E, 194; Large Mollie O, 345; Laurence H H, 350; Lamb W R, 399; Lancaster W, 500; Laughlin A D, 524; Landrum R W, 602; Leonard V, 524; Leifsete F R, 505; Leashier F, 350; Leavitt C, 466; Ledbetter F M, 42, 187; Lee C, 447; Lee F, 139; Lee Minnie E, 180; Lee J M, 456; Leggett G A, 240, 318; Legrone G S, 447; Lemmon W W, 24; Lechler G W, 490, 581; Leonard W E, 250; Leeper Eliz, 432; Lewis, H, 402; Lewedag H, 404; Lemon B H, 610, L'Hommedieu D E & F J, 297; L L E, 614; Lindsey Louie M, 79; Liles R P, 456; Lister S, 449; Little B F, 30, 285; Lizzie, 282; Lobdell C S, 226; Logsdon J F, 404; Lobre A S, 266; Loveland W D, 421, 472; Lowe Mrs B H, 349; Lovejoy R P 449, 524; Louo C A de, 296; Lund E W, 82; Lybarger S C, 473, 506.

Mattock J H, 611; Macquithy Mrs M J, 300; Magee A M, 5, 57; Main J, 12, 558; Mattison Emeline, 6, 590; Martin I G, 143, 289; Martin J H, 25, 32, 75, 125, 234, 327, 350, 375, 491, 592; Martin T J, 194; Markham H C, 134; Madory J, 194; Mary, 349; Malone W, 190; Matthews W D A, 200; Mattoon J, 243; Martin S B, 402; Martin Mrs J N, 235; Martin J W, 349; Markwick S, 296; Markle J, 350; March H A, 358, Mayo J K, 395; Mackey G H, 430, 556; Marshall J W, 558, 610; McCrory R, 149; McIlwain, A F, 276, 278, 295, 373, 396; McRav C E, 244, 250, 536; McWilli W E, 137; McIntyre C W 317; McClaren W W, 110; McCrory Grace, 326; McPhail W A, 86; McCormick J B, 86, 369; McNeill, J C, 35, 436, 511, 595; McFarland R W, 402; McLafferty D, 369; McWilli W E, 340; McCrory Kate, 377; McCord D A, 481, 556, 601, 603; McCord W, 557; McDaniel H H, 495 ; McGregor J, 501 ; McCullers Mrs M E, 559; McWhorter J J, 608; McEvoy W, 610; Meatyard R, 240; Merrill J W, 293; Merrill A W, 448; Mellen R H, 25, 67, 120, 172, 384, 540; Melliger A, 162; Mellette U N, 150; Meloon C O, 91, 266, 551, 577; Merrill A W, 89; Millspaugh W L, 5; Miller N, 225; Miller S A, 33, 397; Miller G C, 187; Minor A, 34; Miller

C C, 232, 282, 296, 324, 535, 557, 586; Michener I, 83, 451; Miller J, 243; Miles C R, 121, 243; Michael J C, 266; Mitchell N C, 81; Miller C W, 350; Midgley J, 162; Miller L E, 391; Mills J P, 192; Mills Z, Jr, 274; Minns H W, 455; Mitchell C R, 605; Mosier J B, 506; Monica J, 486; Morse O C, 505; Moore J E, 36; Moore M B, 230, 343; Moore J P, 239, 473, 578; Moore D W, 305; Moore C H, 339; Mosier M F, 404; Mohler S M, 243; Moody H A, 349; Morgan E A, 78, 87, 110, 138, 173, 443; Morningstar P, 35; Morrison S W, 33, 272, 288, 465, 506; Morris R, 180; Morris H M, 186; Mock J L, 200; Mosher Mrs A C, 92; Morse H, 421; Mosely E C, 472; Morrow Mrs J, 483; Mosely Emily, 485; Mosely E J, 485; Moyer H M, 553, 569; Munson Mary A, 90; Murray J W. 557; Muth C F, 143, 453; Muth-Rasmussen W, 34, 421, 524; Murff D L, 189; Murkar R W, 284; Myers A S, 143, 446; Myers J H, 448; Myers J, 266, 370.

Neil W C, 317, 347; Neads C, 606; Nelson Mabel L, 142, 325; Nelson J A, 200, 295, 454; Neuhaus H, 597; Newell D, 40, 294; Newton W C, 41; Newton J A, 224; Newton H F, 241, 290; Newton Lydia A, 284; Neads C, 402; Neighbor H, 424, 527; Newman Melinda, 538; Newman S M, 549; Newton J T, 559; Nice J F, 400; Nicholas H, 472; Noble J, 65; Northrop G E, 88; Noelting J., 93, 286, 437; Norton W G, 348; Nugent E, 610.

O'Bannon G H, 57; Olsen J E, 236; Onderdonk G, 347; Oren J K, 12, 402, 452, 549; Ormsby V H & L D, 266; Osbun A, 5, 550, 609; Osborne J A, 271; Osborne Addie E, 485; Ottaway M & W, 189.

Painter U S, 398; Parker D G, 530; Paddock Z D, 138; Payne B F, 294; Parmerlee W, 37, 87, 140, 499, 557; Parsons Mrs E M, 38; Parsons A A, 422, 524; Parshall J, 45; Parmenter W, 516; Palmer F A, 193, 532, 543; Pate Mrs W, 454; Peck Florence G, 485; Pearce I D, 27, 451; Perry S C, 144, 194, 503; Perry G, 57; Peirce J H, 278; Penn G W, 143, 175; Peters I C, 382; Pettit S, 91, 453; Pettit S T, 190; Perkins W C, 281; Peters G B, 387, 530; Peters C, 433; Peabody Mrs A L, 483; Phillips G, 606; Phlegar H L, 441; Phares G N, 517; Phillips J C, 84, 91; Phelps W G, 237; Pike D A, 90, 223; Pitman H F, 472; Pickup E, 503; Platts W, 333; Potter C B, 555; Pomeroy H B, 599; Pommert J C, 32; Poppleton O O, 292; Pond G H, 35, 516; Pond J E, Jr, 400, 434, 505, 536, 542, 596; Prentice N E, 194; Pond W H, 433; Pratt A, 151; Pratt D, 505; Pruden N A, 188, 243; Purdy T, 193; Pue W H, 472.

Quesner O B, 610; Quinn R, 214, 224, 403, 610.

Rathbun R, 29, 300; Raitt W, 179; Rater A, 140; Rapp J B, 194, 350; Randall L H, 317; Ray Lillian, 326; Rainbow J P M, 454; Reynolds W W, 370, Reeves E, 91; Reynolds Bros, 149; Reynolds R, 473; Replogle G B, 304, 350; Reed L G, 435; Rhodes R H, 243, 399; Richardson M, 81; Rich S, Jr, 369; Riddel G W, 610; Riggs J E, 590; Roff, Mrs F S, 483; Ross J W, 554; Robertson W S, 41; Robinson E A, 151; Robinson R, 32, 297; Robinson C J, 57; Robbins R B, 31; Roop H, 68; Rose D E, 569; Rosekelly G, 8, 9; Roderick J H, 58, 85, 369, 404. Rodney R W, 225; Roberts W F, 290; Robuck J R, 317; Root L C, 351; Roddy S P, 358; Routon A R, 472; Roberts J, 473; Rowe M T, 473; Romeo, 603; Rouse H L, 609; Ruger W, 294; Rutherford S D, 504; Rumford, I B, 5, 46, 198, 397, 473, 558, 610; Rue C H, 143; Rutherford J, 505; Runnion J F, 550; Russell J, 86; Russell P R, Jr, 193, 605; Russell Cora M, 284; Russell W G, 350.

Sayles H P, 451; Sawdey A M, 569; Salisbury S W, 385; Saltford W G, 403; Sawdey Cora J, 235; Sayers H, 441; Salisbury F A, 351; Sandford R, 91; Saunders N A, 214; Salisbury B, 296; Scranton H, 280; Schermerhorn Jennie, 142; Schwarts D, 214; Schneider A, 92; Schæffer C W, 325; Selahammah, 57; Setford E F, 351; Scheidel W H, 537; Secor E, 121; 239; 289, 600; Seavey G H, 382; Seaton F O, 283; Sedgwick W H, 548; Shook D, 252; Sherman Eliza M, 256; Shedd W H, 190; Shepard N N, 193; Shane W H, 9; Sherman E, 194; Shaw F R, 10, 255; Shaw G D, 169, 554; Shaw H B, 273; Shaw G L, 285 Sheeves G H, 41; Shumaker L M, 45, 214; Shuck S A, 86, 293, 389; Sherfey S W, 123; Shull D C, 170; Sherrick I B R, 224; Shultz L O, 369; Shull H S, 401; Shave J, 456; Shephard T F, 536; Shoemaker P, 391; Sherwood W S, 396; Sherrey W E, 454; Sharp F P, 559; Shangle D, 594; Shimes I H, 604; Skinner E B, 422; Simons M, 547; Sibley J W, 386; Siggins A, 235; Sills J, 510; Slaugh Clara, 40; Smith A S, 294, 472, 500; Smith E E, 6, 611; Smith H M, 144, 162; Smith Mrs W, 5; Smith D C, 225; Smith L S, 135, 224; Smith T, 330; Smith H, 141, 455, 459; Smith A W, 402; Smith W, 404; Smith Claude, 523; Smith C H, 565; Smith J, 596; Smith C T, 601; Snow L, 91; Snow S P, 144; Sneed I R, 314; Snyder B F, 266; Snyder J H, 450; Snyder J K, 558, 604, 608; Snyder M H, 584; Soules L S, 34; Sorter G W, 397; Southwick E B, 502, 536; Sobey E G, 552; Spaulding W M, 394; Spencer O O, 565; Sperry Marietta, 377; Sperry D, 401; Spencer Anna, 180, 326; Spencer V O, 553; Squire A H, 297, 606; Squire Mrs T M, 352, 559; Steele W H, 611; Stanley G W, 464; Stanley T C, 75, 115; Stehle R, 434, 538; Staples I, 35; Storz G A, 500; Stevens M C, 38; Stenger P S, 505; Stites G W, 97, 188, 293, 498, 593; Stiles W L, 162, 271; Steele D F, 85; Stowell Mrs M C, 297; Street S A, 41; Stearns Eugenie, 325; Stringe D C, 91, 550; Steele N F, 369; Stover E, 135; Stevenson I E, 401; St. Martz W, 189; Stemmons J T, 524; Steddom I P C, 200; Steele D F, 557; Stehle R, 239; Stewart W H, 601; Stanger L B, 290; Stocks D, 602; Stoner Jennie E, 589; Summe G, 37; Swarthout J P, 296; Swan M C, 57, 214, 266; Sweet D O, 238, 398.

Tarr E, 26; Taber M F, 501, 608; Tadlock J S, 548; Taylor J G, 255; Taylor J J, 442; Taylor R C, 84, 318, 323, 489; Teague D B, 200; Teats R M, 456; Terris Mary A, 189; Tennant J R, 506; Terry W B, 137; Terry M, 609; Thomson Mrs R, 343; Thorn G, 453; Thornburg J H, 200, 318; Thomson M L, 304; Thomas E A, 77, 126, 266; Thomas R J, 524; Thomson J C, 473; Thompson G W, 559; Thwing C B, 455, 601; Tigges A, 252; Ticknor F A, 297; Timmerman F, 596; Townsend O H, 232; Todd M I, 399, 608; Townsend J E, 135; Townley J H, 221; Tobin C, 350; Torrey D M, 501; Todd J E, 524; Traylor J W, 91, 241, 422, 544; Trussel W R, 144, 194; Treat G M, 214, 304; Tracy W, 597; Train H V, 226, 396, 454; True W, 402; Turner W H, 5; Turner J R, 65; Turnham T R, 41; Tuttle Julia R, 235; Tunnicliffe E, 422; Tweedy D H, 432; Tygard J R, 318.

Underhill D C, 294; Underhill B S, 421; Urich V D, 83; Utley Loretta, 433; Utter J W, 502.

Van Dorn J W, 11; Vankirk L, 29; Van Zandt I L, 601, 609; VanAuken W, 143; Valentine S, 344, 409; Vankirk L W, 350, 373, 453, 505; Viallon P L, 276, 383, 525, 531; Vincent S, 604.

Waddell G H, 5, 40; Walcott Jennie, 234; Warner L, 37, 41, 599; Warner R G, 266, 577; Wardell F J, 90, 370; 402; Warstler H L, 292; Walcher J E, 294; Watt J P, 296, 549; Waterhouse C, 317; Wakefield W, 348, 546; Washburn A, 370; Wallace T G, 402; Ward H, 402; Waterson C C, 422; Wakeman N, 181; Wallace E M, 455; Walker J Q A, 524; Ward T D, 602; Wagner Emma, 589; Webster W T, 558; Webster D G, 455, 523; Webster Jennie, 284; Wemyss W P, 335; Weed A B, 31, 143; Werner J D, 485; Welch C, 142; Weir R M, 300; Weiss H L, 189; Werner Clara E, 538; Wehrman H, 609; White Anna A, 284; White J H, 185; White J D, 192; White F C, 27, 450; White J W, 65, 492, 540; White D W, 402; White D, 449; Whitbeck T L, 449; White H W, 453, 534; Whitman W R, 83, 255, 292; Whitsitt H, 149; White J A, 506; Wheat H L, 550; Williams T, 398; Williams W T, 318; Williams M L, 288; Williams Emma, 283; Wilkins Lucy A, 300; Wilder F N, 22, 231, 317, 558, 610; Wilder Ellen C, 180; Wilkin R, 8, 343, 349, 350, 523, 580; Wilmarth A W, 349; Willis G A, 117; Wiltse J, 497, 540; Wilson W W, 127, 162, 243; Williamson G W, 587; Windisch F G, 292; Willitts O W, 460; Winslow A A, 300; Witt W C, 456; Wininger W, 346; Witfield W, 422; Wickersham M S, 370, 395; Williams M E, 558; Williams G F, 422; Williams C F, 453; Willis A D, 501; Williamson A C, 551; Willows A G, 608; Wier Isabella, 589; Wolf G W, 243; Wolfer M H, 10; Wood N L, 345; Wood C A, 394; Wood J S, 273; Woolver C M, 606; Woodside E L, 42; Woodburn J S, 584; Worth L D, 131; Worth Nellie, 589; Wright C D, 342, 517; Wright F M, 447; Wright G A, 82, 304; Wright F L, 170, 384, 480, 610; Wright W G, 350; Wright W H, 577; W F R, 305; W R W, 303, W W L, 96.

X Y Z, 199, 247, 355, 451, 460.

York M D, 499; Yoder G J, 291; Yoder C J, 138; Yoder S P, 132, 134; Young S, 65, 214; Young G W, 421; Young W W, 369; Young W A, 432; Young W M, 446, 528.

List of Illustrations.

Bliss Sun Evaporator, 220, 221; Cartoon, 149, 200, 225; Cage, Carpenter's, 168; Cage, Alley's, 269; Cage, Peet's improved, 373; Comb-cupboard, Perry's, 503; Comb-holder, McIlwain's, 278; Comb-holder, Minn's, 529; Cutter-head, 98; Clark's starter machine, 218; Dadant's Can for uncapping, 322; Feeder, Bread-Pan, 478; Feeder, De Worth's, 477; Feeder, Glass-tumbler, 122; Given's Frame-wiring machine, 79, 80; Heddon's hive, 116; Hill's Device to cover Frames, 530; Machine to perforate Separators, 425; Machine for Sections, 98; Nail-box, Clark's, 122; Osborne's Frame-puncher, 271; Phelps' Apiary, 237; Planers, Gem and Pony, 114; Queen-rearing Hive, 111; Roop's Hive, 67, 68; Scale's, Chatillon's, 39, 308; Scottish

Apiary, 179; Simplicity Tool-box, 359; Sections, Miller's plan for folding, 282; Shipping-cages and Funnel, 276; Smoker, Our 50-cent, 322; Star Saw-set, 515; Swarming-box, The "Cheese-box," 330; Swarming-pole, McIlwain's, 276; Watch-winder, 274, 373; Waterbury Watch, 569.

Index to Advertisers.

Allen L D, 520: Allen N H, 205, 260, 312; Alley H, 257, 265, 317, 414, 416.

Barnes W F & J, 2d p. of each cover; Barber H, 107, 160, 315, 419; Baer E, 204; Baker G W, 414, 419; Bassett D S, 419; Beebee E B, 3; Benham A D, 4, 56, 108, 160, 213, 310, 362, 367; Bianconcini & Co, 56, 108, 158, 210, 262, 314; Bishop H T, 263, 315; Bingham & Hetherington, 3, 104, 156, 257, 309, 362, 414, 421; Bingham C R, 258, 310, 364; Blystone C H, 421; Brown H H, 212, 264, 317, 369, 468, 520; Brooks J M & Bros, 205, 257, 265, 317, 369, 420; Bright Bros, 108, 160; Brown J P H, 52, 104, 108; 160, 213, 265, 317, 416, 420, 520, 572, 575; Buell S D, 109, 204; Burch H A & Co, 102, 154, 206, 258, 309, 310, 364; Buchanan J A, 257.

Canfield C W, 52, 104, 108, 156, 160, 208, 257, 260, 264, 312, 315, 416, 468, 520, 572, 628; Carv W W & Son, 108, 160, 213, 265, 361; Caldwell J V, 205, 260, 312; Candles C E, 211; Chapman F B, 367; Cheney A W, 159, 213; Clement W P, 5; Coggeshall W B, 310, 315, 369, 420; Croffut W N, 205; Craig W G, 55; Crowfoot I S, 102, 154; Culp H, 3; Culley S P, 315.

Dadant C, 109, 258, 310, 364, 416, 468; Davidson J J, 212; Deane C H, 620; Doolittle G M, 205, 213, 265, 362, 628; Dorman M L, 4, 55, 107, 158, 210, 262, 314, 366, 418, 520, 572, 628; Douglass O, 108; Dougherty T W, 471; Duvall C D, 204, 212, 264, 317, 367, 421.

Edwards I, 50, 575; Elwood W F, 109, 205; Estey E, 159.

Faris J, 57, 109, 159, 212, 471; Fahnestock A, 159; Fischer & Stehle, 204, 211; 316; Flanagan E T, 310, 317, 369; Forncrook J & Co, 52, 102, 108, 161, 257, 414; Foster O, 57, 205, 211, 213, 309, 316, 369; Fradenburg A A, 214.

Gastman E A, 159, 263; Gillespie Mrs Dr, 575; Given D S, 52, 56, 109, 159, 211, 263, 362; Good I R, 109, 161, 212; Graves C A, 575; Green J A, 361, 368; Griffith H L, 315.

Harrington H B, 318; 413, 421, 471, 522; Hagen H F, 367; Harkness J W, 414; Hall & Johnson, 107, 159, 257, 310, 421; Hayhurst E M, 109, 160; 213, 265, 361, 413, 420, 471; Harrison E M, 161, 212, 264, 316; Heddon J, 104, 156, 208, 260, 312, 468; Henderson W P, 3, 55, 107, 208, 260, 312; Hoffman J, 3, 55, 109, 204; Holloway J P, 153, 160; Holmes F W, 55, 263, 414; Holcombe & Co, 361; Hutchinson W Z, 161, 212, 264, 362, 368, 421, 520, 572; Hyde R, 107.

Israel N J, 109, 159.

Johnson H C, 153, 160, 213; Johnson J I, 56, 108, 160.

Kemp W C R, 211; Kinzie J M, 421, 520, 572, 575; Kingslep C, 5, 102, 575; King A J & Co, 628; Kiser J J, 419, 471; Kleinow O, 159, 212, 263, 315, 369, 468.

Lake C H, 57, 108; Larkin C S, 52, 104, 156, 161, 208, 211; Landes J R, 154, 208, 257, 265; Labar R A, 523; Lewis G B, 52, 104, 156, 205, 213, 265; Lewis & Detwiler, 159, 211; Leonard V, 367.

Maher & Grosh, 55, 107, 159, 211, 263, 315, 367, 419, 471, 572, 628; Mann R & Son, 204; Mallalieu R, 212; Martin J H, 419; McFatridge L C, 56, 109, 160, 213, 265; McGregor J, 3, 55; McQueen C, 161; McLean S D & Son, 102, 154, 206, 258, 310, 315; Merriam & Falconer, 104, 156, 208, 260, 312, 364, 416, 468, 520, 572, 628; Mielke F J, 419; Moore J E, 3; Moore J P, 315, 367, 421; Morris H M, 102, 154, 161; Murray J B, 102, 154; Muth C, 52, 104, 156, 208, 260, 312, 364, 416, 468, 520, 572, 628.

National Farmer, 57, 154, 208; Newman A H, 52, 104, 156, 208, 260, 312; Newman T G, last page of each cover, and 575; Newhaus H, 419, 471; New England Bee Sournal, 576; Nicholas H, 206; 258, 310, 317, 416, 468; Nichols & Elkins, 109, 159, 211, 265; Nostrand P E, 362, 368; Nugent S, (Dr E) 523, 575.

Oldroyd W, 4, 54, 108, 158, 210, 262, 314, 418, 470, 522, 574; Olm C, 2, 54, 102, 154, 206, 211, 263, 315, 369, 420, 471, 572, 628; Osborne J A, 107, 211.

Parker C H, 204; Pike D A, 57, 108, 211; Pommert J C, 159, 257; Post W O, 109, 160; Poole H, 523, 576; Pryer B C, 206; Purdy of Palmyra, 576.

Richmond H L, 523; Rogers W, M, 414; Roop H, 56, 102, 154, 206, 258; Root A I, 2, 4, 52, 54, 55; Root L C & Bro, 205, 213, 265, 362, 414, 468, 471; Ross H S, 161, 213, 265; Rutherford S D, 575.

Sayles J C & H P, 3, 55, 107, 208, 260, 312, 364, 416; Salisbury F A, 53, 104, 156, 208; Sanford B F, 362; Schofield I L, 109, 204, 206, 213, 258, 265; Shaw N H, 52; Sherwood E H, 206, 258; Sherrick C, 56; Sherrick J B R, 205; Sherfy R, 109; Shuck S A, 211, 263; Stratton C L, 102; Stanley G W, 212, 264, 316; Stump Mrs W, 109; Stiles E P, 206; Stauffer A F, 213, 367; Steele W H, 263; St John L E, 362, 368; Staples D, 421, 520; Sutton P, 5, 101; Smith *W* G, 263, 264, 265, 310; Smith E D, 368.

Taylor J M C, 309, 361, 422; Thomas E A, 56, 57, 102, 109, 205, 211, 263; Thompson R G, 310; Townsend F E, 263, 315; Townsend O H, 212, 263, 315, 367, 416, 419, 471, 572; Train H V, 310, 362.

Underhill B S, 205, 257, 316.

Valentine S, 154, 206, 258; Van Allen E, 159; Van Deusen J & Sons, 52, 104, 156, 208, 260, 312, 364, 416, 468, 520, 572, 575; Van Eaton C J, 52; Van Frank W W, 109, 206; Viallon P L, 56, 160, 257, 264, 316, 368, 420, 520.

Watts J P, 102, 154, 206, 421; Walker B, 263, 362, 413; Ward J A, 159; Webster D G, 421; White D, 257, 309; Wilson J T, 57, 108, 160, 213, 265, 317, 369, 420; Wittman T F & Co, 264; Willows A G, 367; Wolfender J L, 367; Woodburn J S, 471; Wright F L, 102, 367; Wright C D, 414.

Yoder S P, 57, 628; York A M, 422.

Honey Column.

Under this head will be inserted, free of charge, the names of all those having honey to sell, as well as those wanting to buy. Please mention how much, what kind, and prices, as far as possible. As a general thing, I would not advise you to send your honey away to be sold on commission. If near home, where you can look after it, it is often a very good way. By all means, develop your home market. For 25 cents we can furnish little boards to hang up in your dooryard, with the words, "Honey for Sale," neatly painted. If wanted by mail, 10 cents extra for postage. Boards saying "Bees and Queens for Sale," same price.

CITY MARKETS.

CLEVELAND.—*Honey.*—Choice white 1-lb. sections have advanced another step. We have been enabled to sell all consignments this month for 22 cts. per lb.; 2-lb. sections, 20 cts.; extracted, in 30 to 40 lb. cans, 12 cts.; in ½ barrels, 11 cts. *Beeswax*, 20@22c. These are the prices we sell for on commission; we do not buy. A. C. KENDEL.

Cleveland, Ohio, Nov. 21, 1881.

NEW YORK.—*Honey.*—We quote honey as follows: Best white comb, put up in neat packages, 18@20c; fair, 15@17c; dark and buckwheat, 12@14c. We have no large boxes, therefore we don't quote them. Best white extracted honey, 10@11c; dark and buckwheat, 7@8c. *Beeswax.*—Prime yellow, 23@24c.

H. K. & F. B. THURBER & Co.

New York, Nov. 25, 1881.

CHICAGO, Nov. 23.

Honey.—For extracted honey there is a lively demand; but offerings, at prices quoted, are abundant. For honey in the comb, in single-pound sections, the demand is good, many preferring the 1-lb. sections to those larger. Honey in boxes, holding 4 to 12 lbs., is of very slow sale, and at a discount from the regular rate, of 2 to 5 c. per lb. I quote prices as follows: White, in comb, 1 and 2 lbs., 18 to 22 c.; extracted, white, 9 c.; dark, 8, if in small bbls. or kegs. Large bbls. are at a discount, as they can not be as easily sold or handled. A. H. NEWMAN.

CINCINNATI, Nov. 23.

Honey.—The demand for extracted honey is very good, and the supply is fair. It brings readily 8 to 11 c. on arrival. Demand for comb honey is medium, to keep pace with the supply. A choice article brings 18 c. in our market on arrival. It retails from 20 to 25 c. per lb.

Beeswax is quoted from 20 to 22 c. C. F. MUTH.

DETROIT, Nov. 24.

Honey.—The supply and demand for comb honey are about equal. It is bringing from 18 to 20 c.

Wax, 20 to 25. A. B. WEED.

FOR EXCHANGE.

50 STANDS of Italian Bees for exchange for some in Canada or near. Address

12-1d A. W. SORY, Devall's Bluff, Ark.